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MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			EXAMINER RAMPURIA, SATISH	
			ART UNIT 2191	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/696,426

Applicant(s)

MILLER, WILLIAM L.

Examiner

Satish S. Rampuria

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

1. This action is in response to the amendment filed on 06/04/2007.
2. The objection to contains an embedded hyperlink and/or other form of browser-executable code is withdrawn in view of Applicant's amendment.
3. The rejection under 35 U.S.C. §101 to claims 29-36 is withdrawn in view of Applicant's amendment.
4. The objection to claims 9-10 and 18-19 is withdrawn in view of applicant's amendment.
5. Claims amended by the applicants: 9, 10, 18, 19 and 29-36.
6. Claims 1-36 are pending.

***Response to Arguments***

7. Applicant's arguments filed 06/04/2007 have been fully considered but they are not persuasive.

In the remarks, the applicant has argued that:

For a proper rejection under 35 U.S.C. § 103, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. See MPEP § 2142. With respect to the rejections based on the combination of Breeden et al and Gove et al., Applicants note that, as presented, independent claims 1 and 12 recite an integrated development environment linked to a run time environment that includes, among other things, "agents that detect failures", "wherein the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors." Likewise, independent claims 21 and 29 require "detecting failures within the run-time environment; tracing the failures back to the integrated development environment; and identifying the model errors in the integrated development environment based on the tracing of the failures." Applicants assert that the combination of Breeden et al. and Gove et al. fails to disclose or suggest the claimed invention.

Neither Breeden et al. nor Gove et al. discloses a system in which errors detected in a run time environment are traced back to a development environment to determine model errors. As the Office Action recognizes, "Breeden does not explicitly disclose whereby the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors." Office Action, p. 5. Furthermore, the Office Action cites a portion of Gove et al. - "then the developer reviews the performance data and debugs the program" - that describes human debugging of a program, rather than a computer-based system for tracing failures in a run-time environment back to a development environment. Office Action, p. 5. In any case, neither Breeden et al. nor Gore et al. discloses tracing errors back through a link, as disclosed in the present application and recited in the claims. See generally p. 22, line 9 to p. 28, line 6.

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For at least the above reason, Applicants assert that independent claims 1, 12, 21, and 29 are not rendered obvious by the combination of Breeden et al. and Gove et al. Applicants therefore respectfully request reconsideration and withdrawal of the rejection of these claims.

Examiner's response:

In response to applicant's argument, first of all objection to trademark Intel still stand rejected. Applicants described that trademark is not used to identify the product, however the discloses paragraph on specification is states "A variety of processing units are available from a variety of manufacturers, for example, Intel or Advanced Micro Devices." Nowhere, doesn't it identify the products available by the manufacturers Intel or Advanced Micro Devices. Applicants argued that the limitation "whereby the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors" is disclosed by neither Breeden nor Gove. Examiner disagree. The limitation is taught by the reference Gove, Gove discloses a method for developing a software program using and integrated development environment. Gove not only discloses human debugging of a program, as indicated by the Applicants, but also discloses a compiler reports a problem in IDE development process then the line which causes the problem is highlighted (paragraph [0021]). Applicant's only makes general allegations. Therefore, the rejection is proper and maintained herein.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

### ***Specification***

9. The disclosure is objected to because of the following informalities:

Appropriate correction is required.

The use of the trademark/service mark "Intel" has been noted in this application (i.e., page 9). It should be appropriate or proper term for details please visit <http://www.intel.com/intel/legal/tmsymack2.htm> (see MPEP 608.01(v)) used, wherever it appears and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 9-10 and 18-19 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amended claims recite the full form as (Development, Run-time, Development) of abbreviation "DRD" which is not supported by the original specification.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-3, 5-6, 8-13, 15-16, 18-24, 26-32, and 34-36 rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication No. 2006/0206856 to Breeden et al. (hereinafter, Breeden) in view of US Publication No. 2004/0006760 to Gove et al. (hereinafter, Gove).

**Per claim 1:**

Breeden disclose:

- A system for learning model-based lifecycle diagnostics, the system comprising:
- an integrated development environment having software tools linked within (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)...");
- a run-time environment having agents that detect failures linked within (paragraph [0067] "Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed..."); and
- a bi-directional link between the integrated development environment and the run-time environment (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)...").

Breeden does not explicitly disclose whereby the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors.

However, Gove discloses in an analogous computer system whereby the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors (Gove paragraph [0020] "After the performance data is collected by the IDE, then the developer reviews the

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performance data and debugs the program (i.e., fixes execution problems of the program)...”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of whereby the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors as taught by Gove into the method of developing software in an integrated development environment and in run time environment as taught by Breeden. The modification would be obvious because of one of ordinary skill in the art would be motivated to detect the failures in the run time environment and trace back to the development to fix them to optimize the end process performance as suggested by Gove (paragraph [0010]).

**Per claim 2:**

The rejection of claim 1 is incorporated and further, Breeden disclose:

- wherein the integrated development environment includes requirements management tools, design tools, and implementation tools linked together (paragraph [0013] “...application development system that assists in the developing, debugging, testing, deploying, and running of web applications”).

**Per claim 3:**

The rejection of claim 2 is incorporated and further, Breeden disclose:



- wherein the requirements management tools includes an object oriented requirements management tool and an issue-based information system requirements management tool (paragraph [0023] "design-time environment... allow... developer to develop JSP-based portal applications using a collection of... source editors").

**Per claim 5:**

The rejection of claim 2 is incorporated and further, Breeden disclose:

- wherein the implementation tools include a software function code generation, management, and deployment tool, and a software diagnostic code generation, management (paragraph [0013] "...application development system that assists in the developing, debugging, testing, deploying, and running of web applications").

**Per claim 6:**

The rejection of claim 1 is incorporated and further, Breeden disclose:

- wherein the run-time environment includes diagnostic agents (paragraph [0067] "Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed...").

**Per claim 8:**

The rejection of claim 1 is incorporated and further, Breeden disclose:

- wherein the run-time environment includes a database, a server software tool, a broker, and diagnostic agents (paragraph [0062] "run time environment includes a Control container and Lifecycle driver... with the control factory...servlet container").

**Per claim 9:**

The rejection of claim 1 is incorporated and further, Breeden disclose:

- wherein the bi-directional link is a DRD link (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)...").

**Per claim 10:**

The rejection of claim 9 is incorporated and further, Breeden disclose:

- wherein the DRD link includes a database (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)...").

**Per claim 11:**

The rejection of claim 10 is incorporated and further, Breeden disclose:

- wherein the database is a distributed database (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)..."). -

**Claims 12-13, 15-16, 18-20** are the system claim corresponding to system claims 1, 3, 5-6, and 9-11 respectively, and rejected under the same rationale set forth in connection with the rejection of claims 1, 3, 5-6, and 9-11 respectively, above.

**Per claims 21, 27 and 28:**

Breeden disclose:

- A method of diagnosing model errors in a software environment including an integrated development environment and a run-time environment bi-directionally linked by a link (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)..."), the method comprising:
- detecting failures within the run-time environment (paragraph [0067] "Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed...").

Breeden does not explicitly disclose tracing the failures back to the integrated development environment; and identifying the model errors in the integrated development environment based on the tracing of the failures.

However, Gove discloses in an analogous computer system tracing the failures back to the integrated development environment; and identifying the model errors in the integrated development environment based on the tracing of the failures

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(Gove paragraph [0020] "After the performance data is collected by the IDE, then the developer reviews the performance data and debugs the program (i.e., fixes execution problems of the program)...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of tracing the failures back to the integrated development environment; and identifying the model errors in the integrated development environment based on the tracing of the failures as taught by Gove into the method of developing software in an integrated development environment and in run time environment as taught by Breeden. The modification would be obvious because of one of ordinary skill in the art would be motivated to detect the failures in the run time environment and trace back to the development to fix them to optimize the end process performance as suggested by Gove (paragraph [0010]).

**Per claim 22:**

The rejection of claim 21 is incorporated and further, Breeden disclose:

- wherein detecting failures includes using model-based diagnostic agents to detect failures within the run-time environment (paragraph [0067] "Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed...").

**Per claim 23:**

The rejection of claim 22 is incorporated and further, Breeden disclose:

- further comprising determining root causes for known failure modes based on the failures detected by the model-based diagnostic agents (paragraph [0067] “Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed...”).

**Per claim 24:**

The rejection of claim 21 is incorporated and further, Breeden disclose:

- wherein detecting failures includes using learning model-based diagnostic agents to detect failures within the run-time environment (paragraph [0067] “Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed...”).

**Per claim 26:**

The rejection of claim 24 is incorporated and further, Breeden disclose:

- wherein tracing failures includes the diagnostic agents writing information into the link (paragraph [0020-0021] “...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)...”).

**Claims 29-32 and 34-36** are the system claim corresponding to method claims 21-24 and 26-27 respectively, and rejected under the same rationale set forth in connection with the rejection of claims 21-24 and 26-27 respectively, above.

14. Claims 4, 7, 14, 25, and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over Breeden in view of Gove and further in view of US Patent No. 6,167,353 to Kaneshvsky et al. (hereinafter, Kaneshvsky).

**Per claim 4:**

The rejection of claim 2 is incorporated and further, neither Breeden nor Gove explicitly disclose wherein the design tools include an object oriented model driven function design tool, a knowledge-based diagnostics design tool, and a model-based diagnostic design tool.

However, Kaneshvsky discloses in an analogous computer system wherein the design tools include an object oriented model driven function design tool, a knowledge-based diagnostics design tool, and a model-based diagnostic design tool (col. 2, lines 29-40 "...model based diagnostic system...enables selection of components... response to indications").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of wherein the design tools include an object oriented model driven function design tool, a knowledge-based diagnostics design tool, and a model-based diagnostic design tool as taught by Kaneshvsky into the combination system the method of developing software in an

integrated development environment and in run time environment as taught by Breeden and Gove. The modification would be obvious because of one of ordinary skill in the art would be motivated to have a model-based diagnostic design tool to provide an automated test tool as suggested by Kanessvsky (col. 2, lines 16-26).

**Per claim 7:**

The rejection of claim 6 is incorporated and further, neither Breeden nor Gove explicitly disclose wherein the diagnostic agents include model-based diagnostic agents and learning model-based diagnostic agents.

However, Kanessvsky discloses in an analogous computer system wherein the diagnostic agents include model-based diagnostic agents and learning model-based diagnostic agents (col. 2, lines 29-40 "...model based diagnostic system...enables selection of components... response to indications").

The feature of wherein the diagnostic agents include model-based diagnostic agents and learning model-based diagnostic agent would be obvious for the reasons set forth in the rejection of claim 4.

**Claims 14** are the system claim corresponding to system claim 4, and rejected under the same rationale set forth in connection with the rejection of claim 4, above.

**Claim 25** are the method claim corresponding to system claim 4, and rejected under the same rationale set forth in connection with the rejection of claim 4, above.

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**Claim 33** are the computer program product claim corresponding to system claim 4, and rejected under the same rationale set forth in connection with the rejection of claim 4, above.

### **Conclusion**

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Satish S. Rampuria** whose telephone number is **(571) 272-3732**. The examiner can normally be reached on **8:30 am to 5:00 pm** Monday to Friday except every other Friday and federal holidays. Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: 571-272-2100**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Wei Y. Zhen** can be reached on **(571) 272-3708**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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